PEDESTRIAN CRASH ANALYSIS

greensboro urban area MPO
metropolitan planning organization
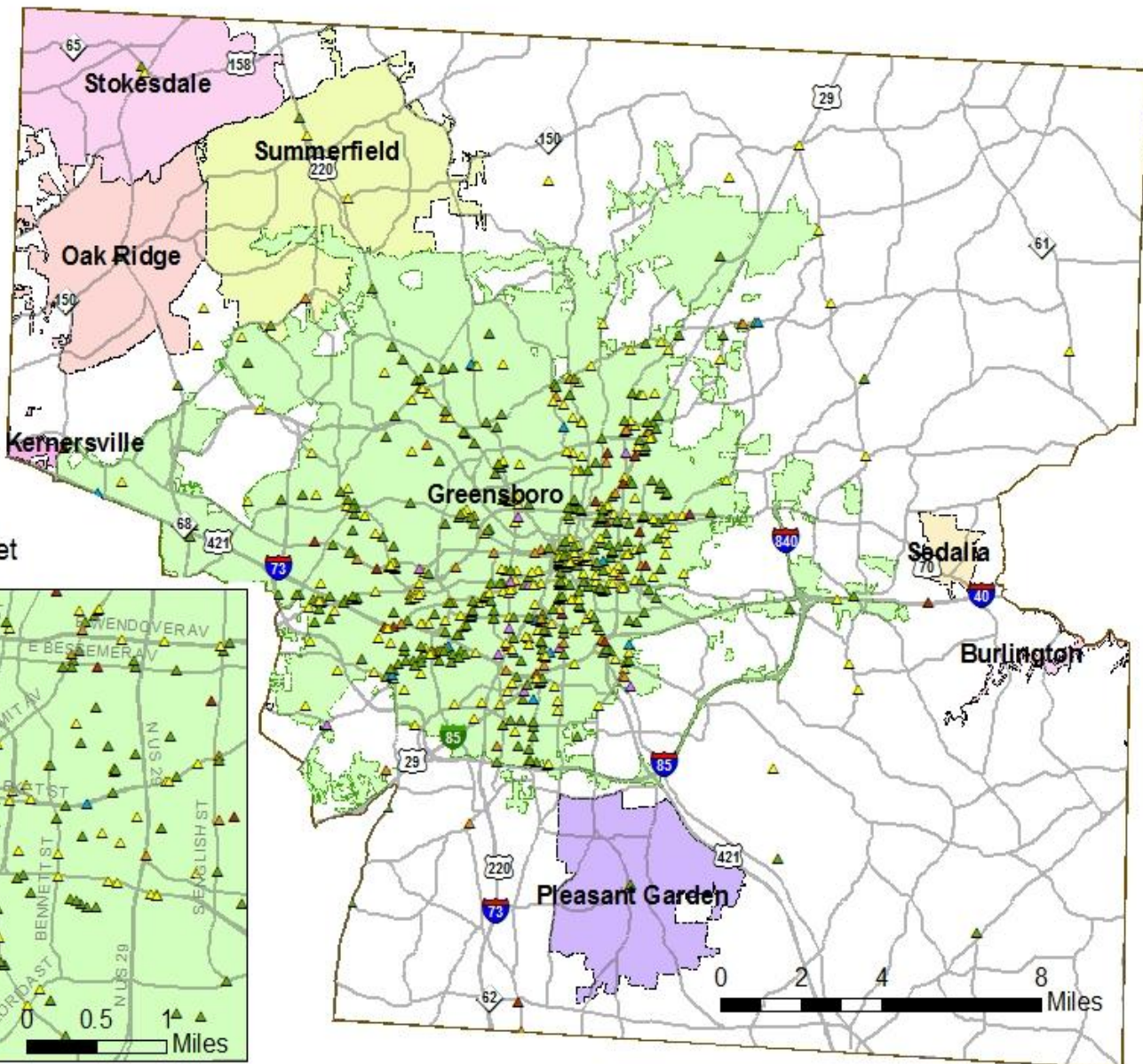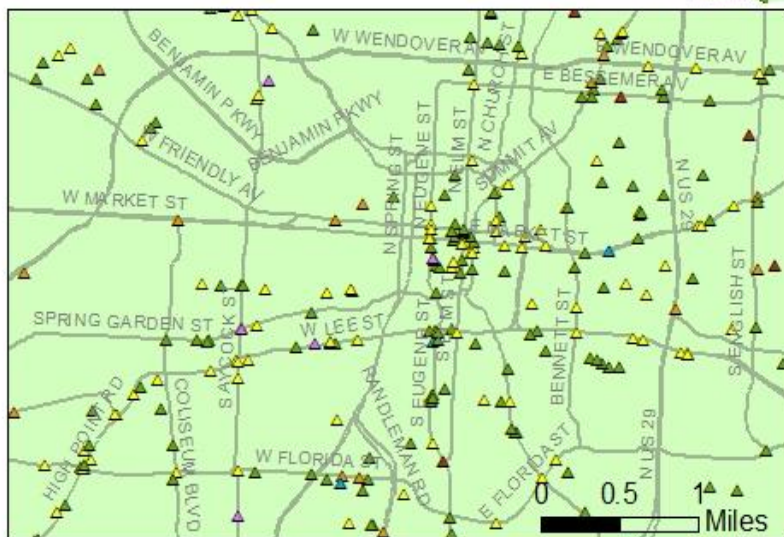
PEDESTRIAN CRASH ANALYSIS

- Evaluating pedestrian safety is a critical precursor to recommending a system of pedestrian facility improvements.

- The Pedestrian Crash Analysis looks at all aspects of pedestrian crashes in the Greensboro Urban Are MPO.

- Identify all of the possible factors that contribute to the pedestrian crashes in the region:
  - ❖ WHAT is the trend of the pedestrian crash?
  - ❖ WHERE crashes happened?
  - ❖ WHY crashes happened?
  - ❖ WHEN crashes happened?
  - ❖ WHO involved in the crashes?

2007 - 2011 Pedestrian Crashes in Greensboro Urban Area MPO

Pedestrian Injury

▲ Fatality
▲ Disabling Injury
▲ Evident Injury
▲ Possible Injury
▲ No Injury
▲ Unknown Injury

Stokesdale

Summerfield

Oak Ridge

Kernersville

Greensboro

Sedalia

Burlington

Pleasant Garden

0   2   4   8
Miles

Downtown Greensboro Inset

W WENDOVER AV

E WENDOVER AV
E BESSEMER AV

BENJAMIN P KWY

BENJAMIN PKWY

W FRIENDLY AV

W MARKET ST

W LEE ST

SPRING GARDEN ST

W FLORIDA ST
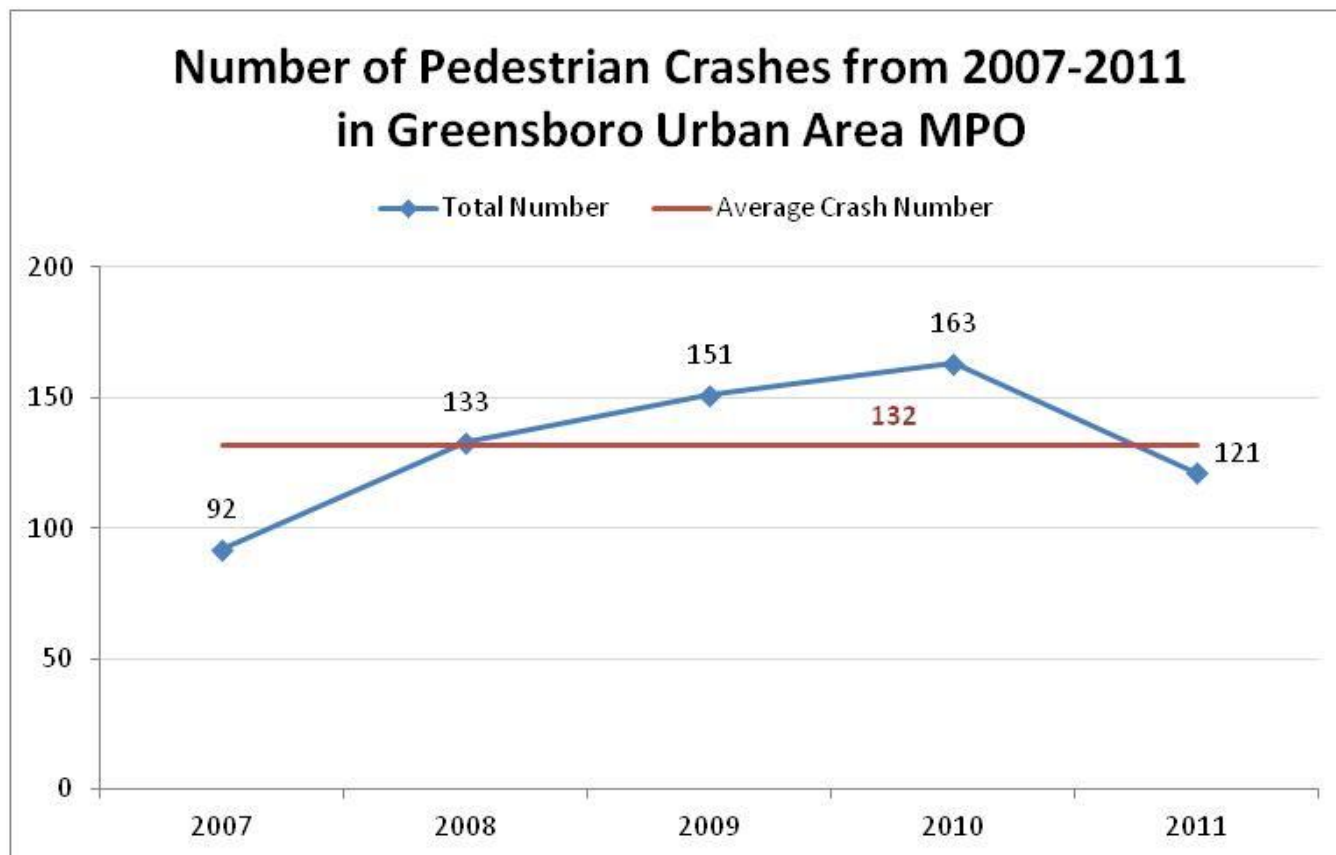
HIGH POINT RD

COLISEUM BLVD

0   0.5   1
Miles

Data Source: NCDOT Division of Bicycle and Pedestrian Transportation
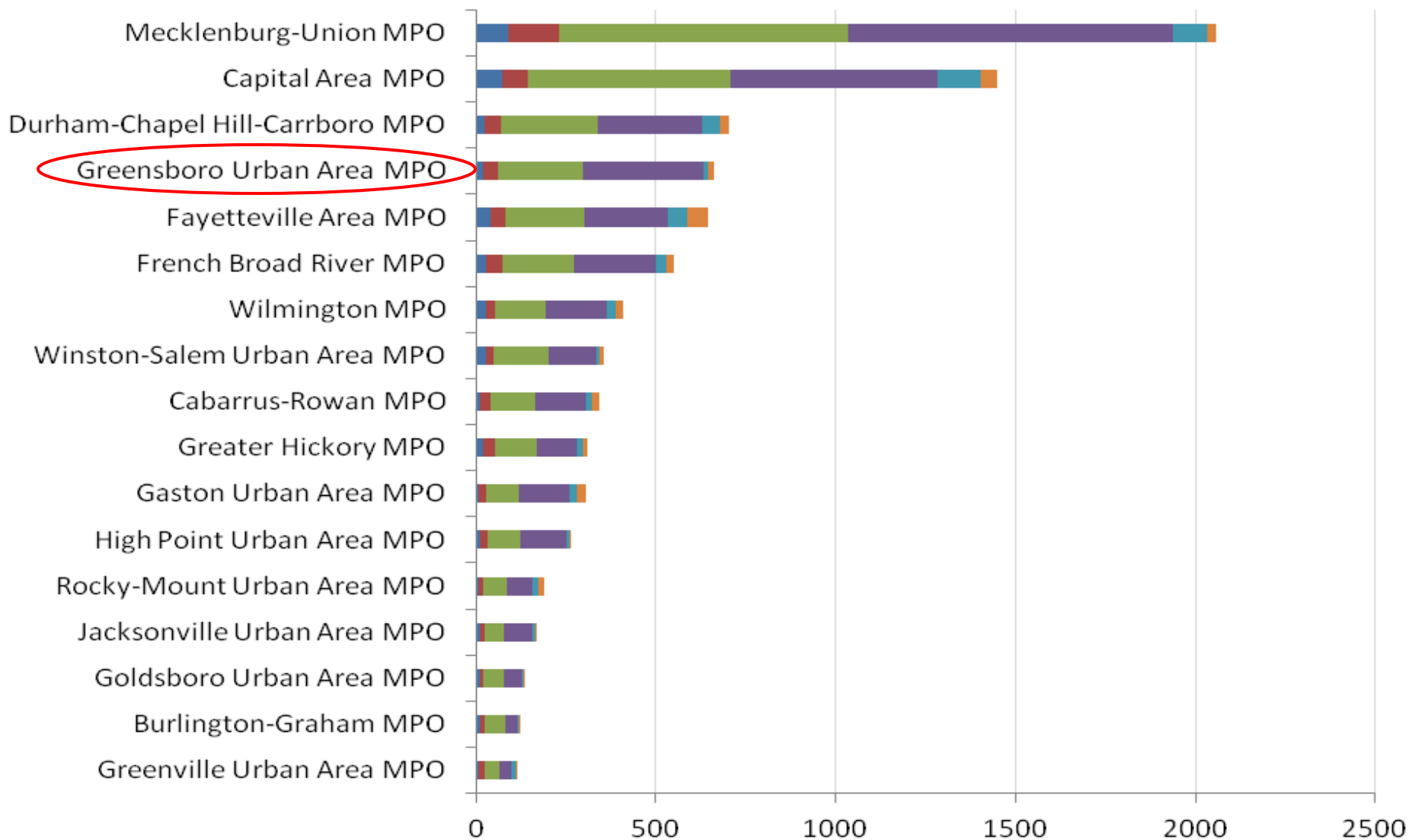
KEY FINDINGS: WHAT IS THE TREND OF PEDESTRIAN CRASHES?

- An average of 132 pedestrian-motorist crashes occurred annually from 2007-2011.

Number of Pedestrian Crashes from 2007-2011 in Greensboro Urban Area MPO

Number of Pedestrian Crashes in MPOs from 2007-2011

Legend: ■ Fatality ■ Disabling Injury ■ Evident Injury ■ Possible Injury ■ No Injury ■ Unknown Injury

- Mecklenburg-Union MPO
- Capital Area MPO
- Durham-Chapel Hill-Carrboro MPO
- Greensboro Urban Area MPO
- Fayetteville Area MPO
- French Broad River MPO
- Wilmington MPO
- Winston-Salem Urban Area MPO
- Cabarrus-Rowan MPO
- Greater Hickory MPO
- Gaston Urban Area MPO
- High Point Urban Area MPO
- Rocky-Mount Urban Area MPO
- Jacksonville Urban Area MPO
- Goldsboro Urban Area MPO
- Burlington-Graham MPO
- Greenville Urban Area MPO
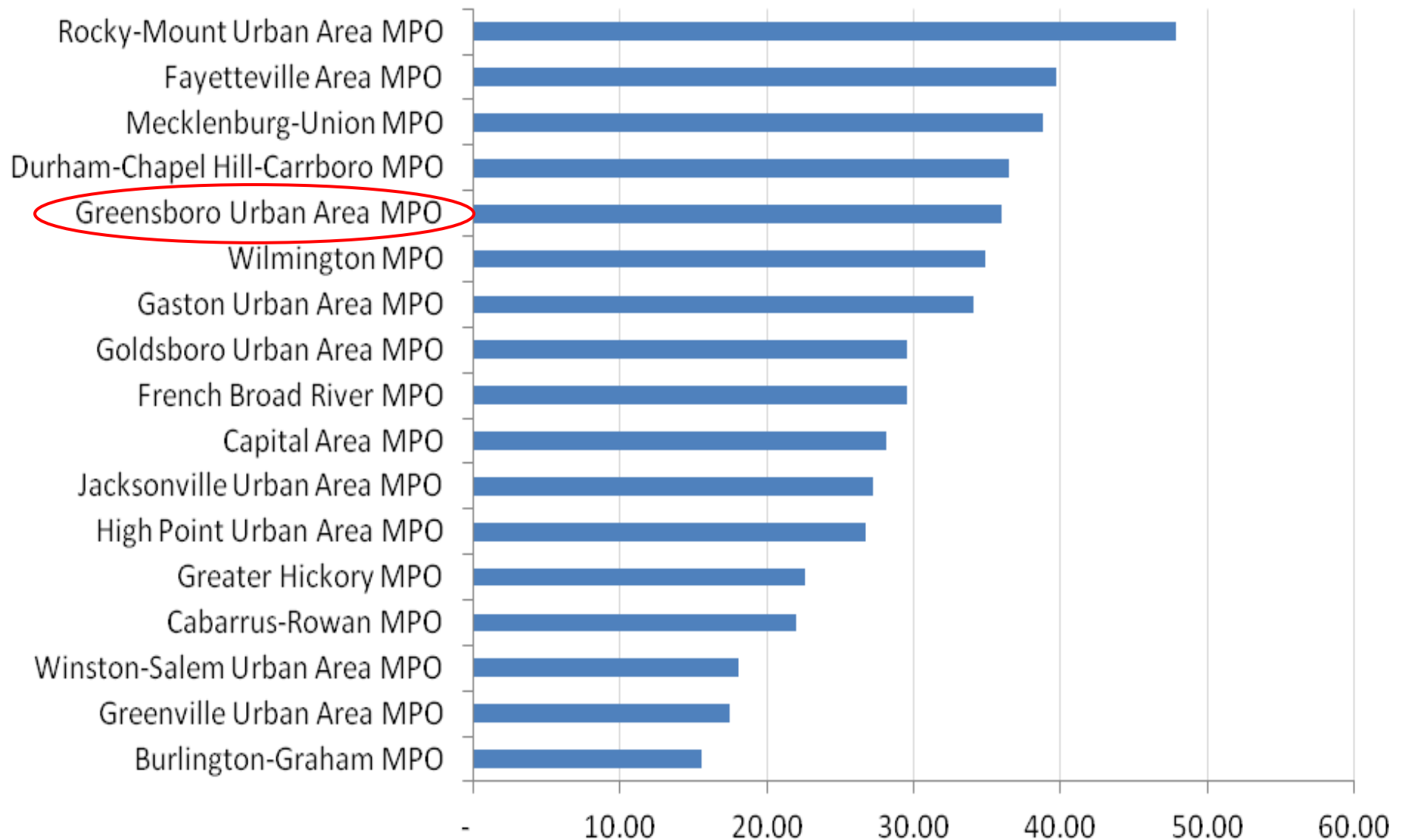
X-axis: 0, 500, 1000, 1500, 2000, 2500

KEY FINDINGS: WHAT (Cont.)

- The average of pedestrian crash per 100,000 population was 36 from 2007-2011.

2007-2011 Pedestrian Crash Rate per 100,000 population in Greensboro Urban Area MPO
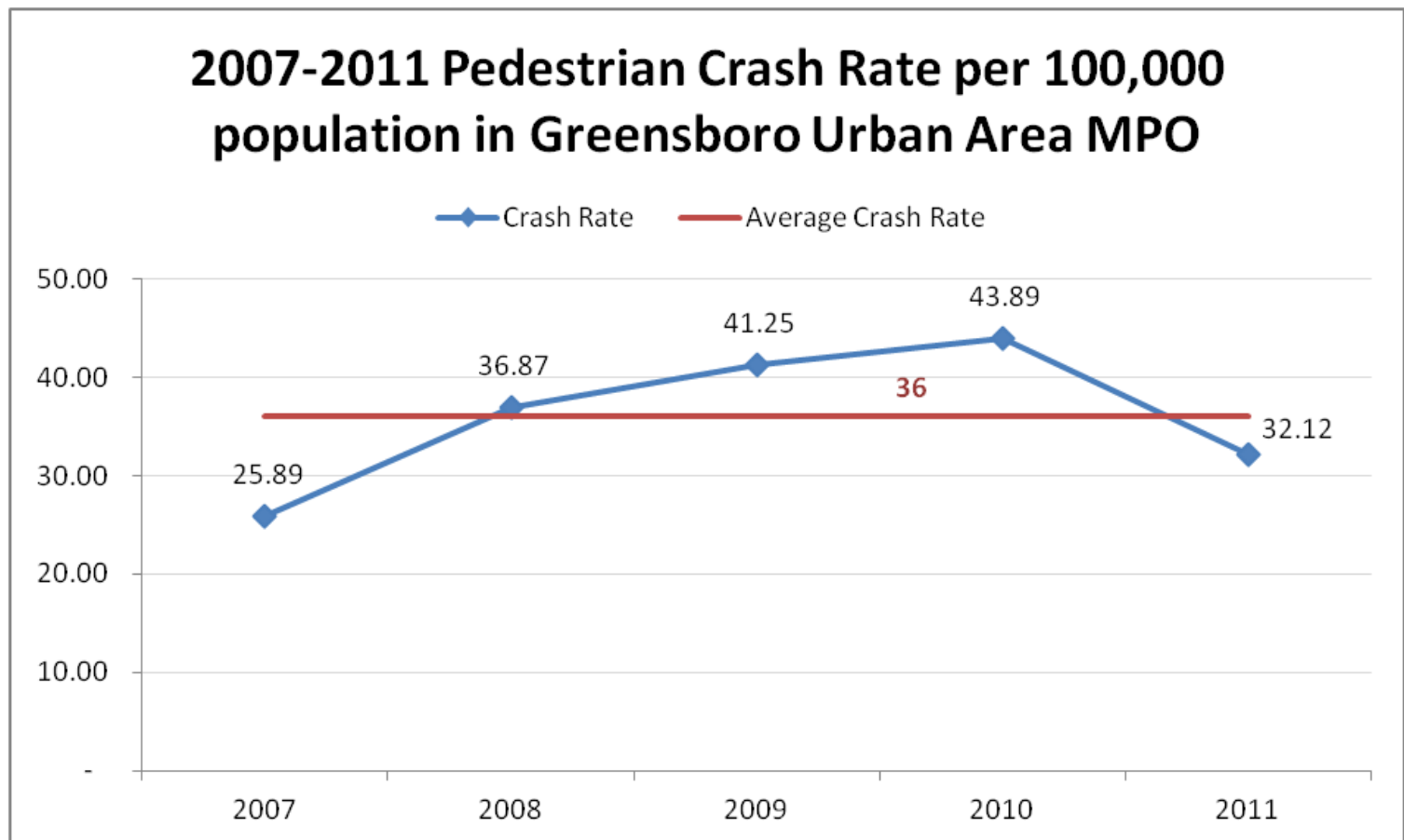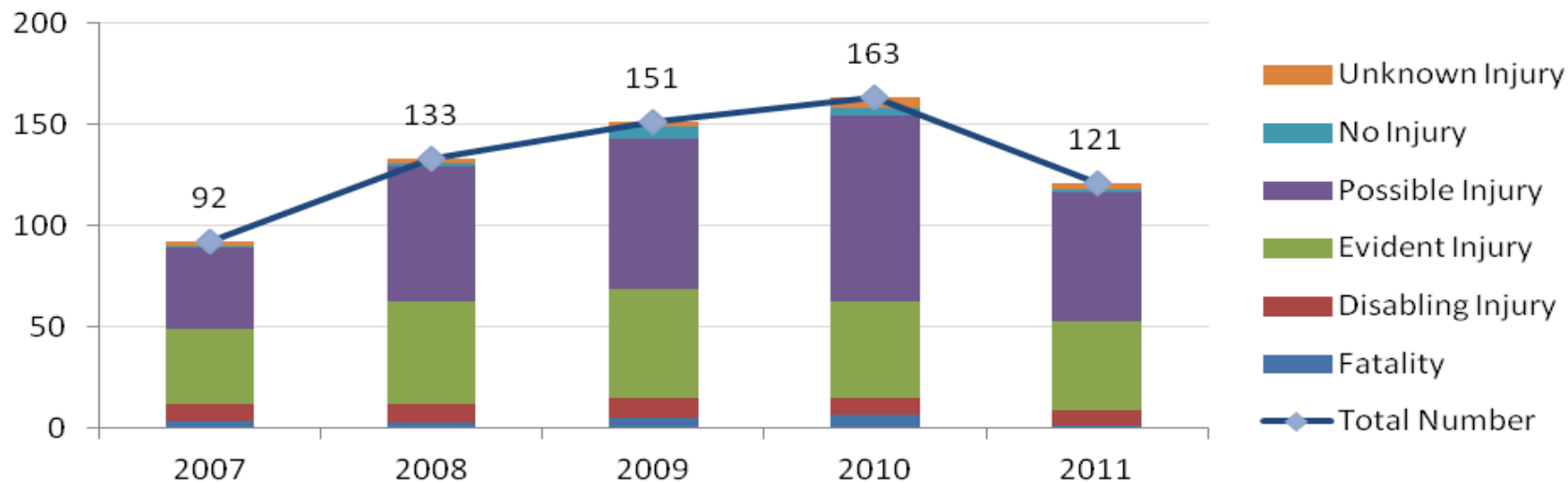
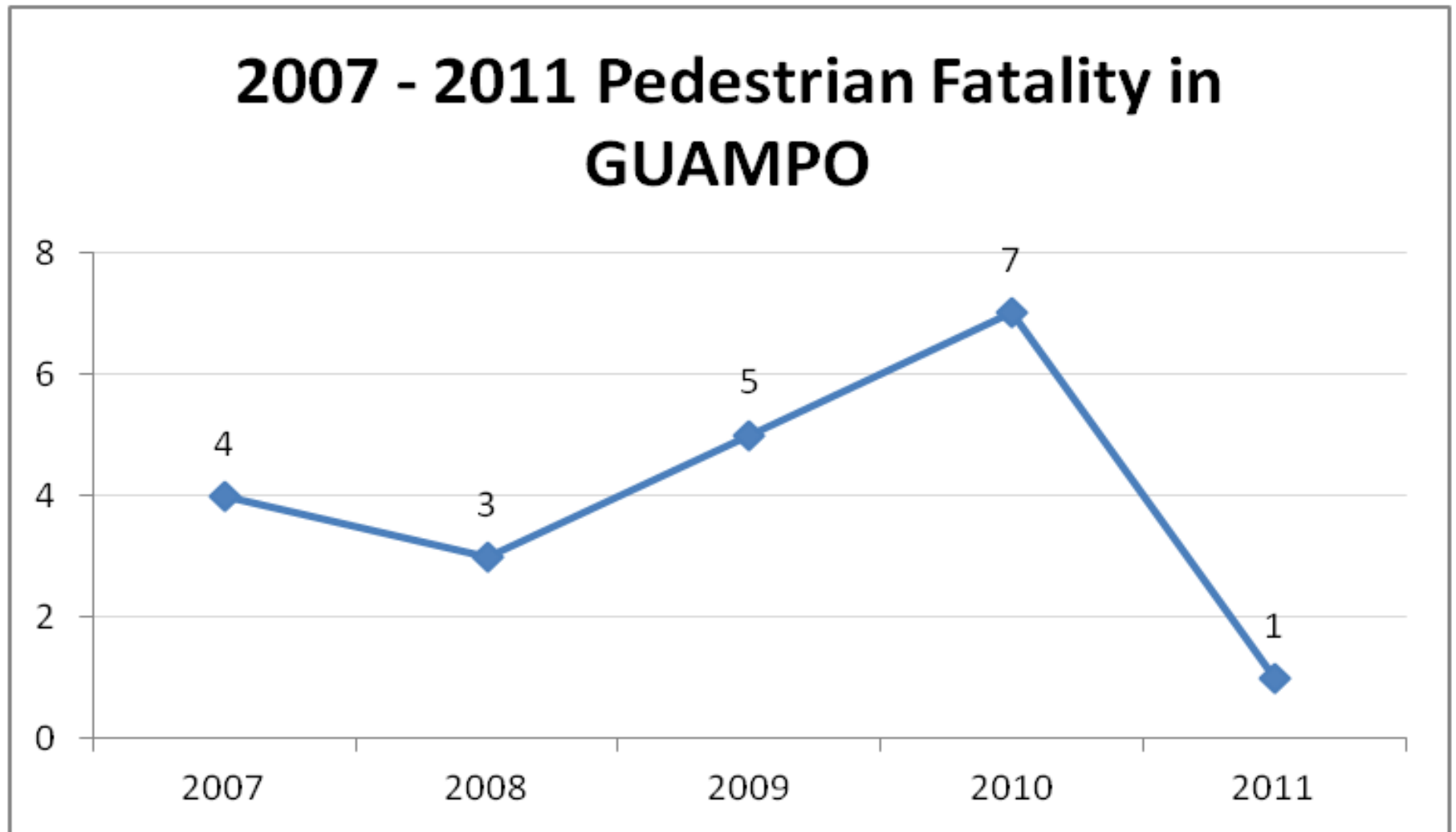# Pedestrian Crash Rate per 100,000 Population in MPOs 2007 - 2011

KEY FINDINGS – WHAT (Cont.)

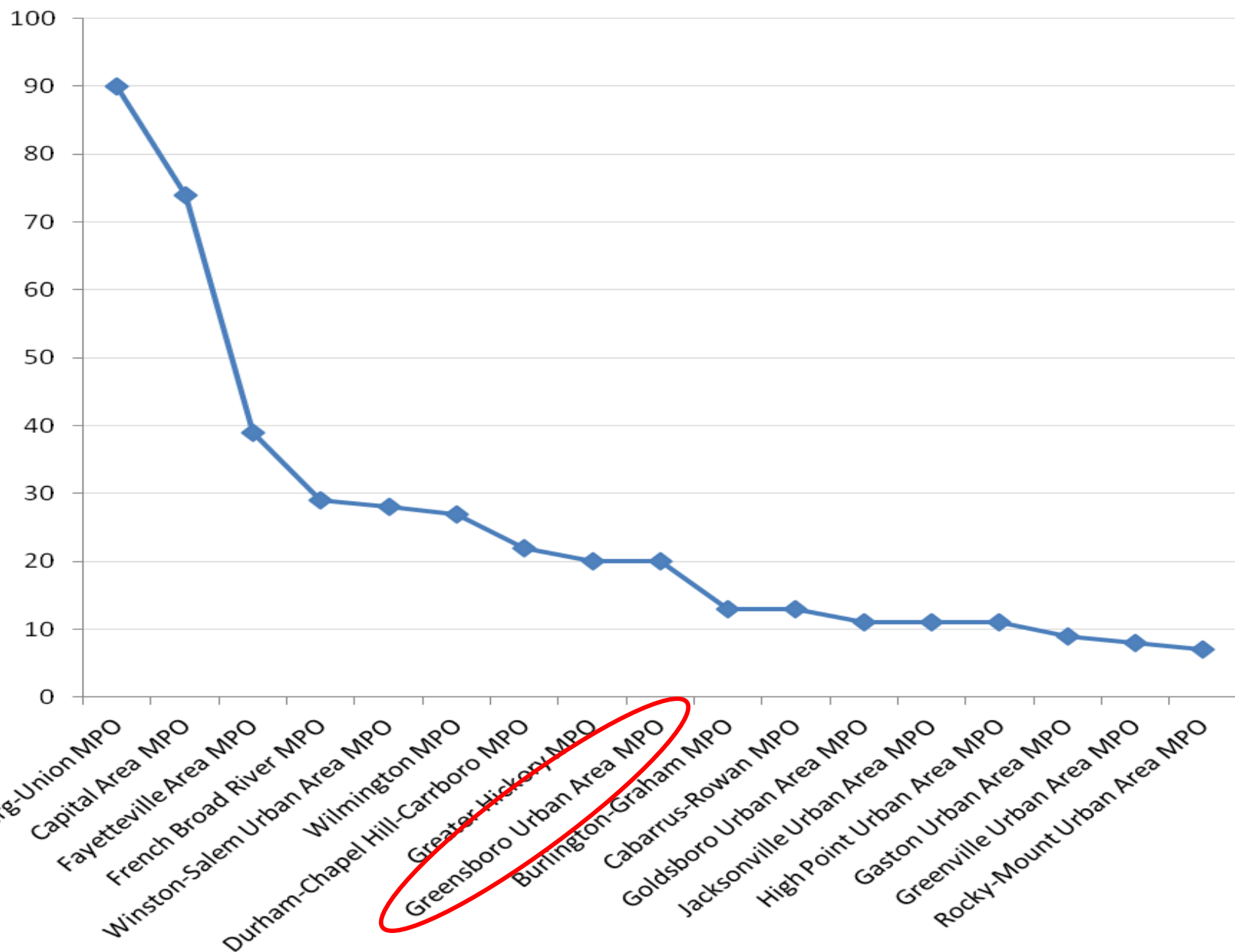Pedestrian Crash Severity from 2007 to 2011 in Greensboro Urban Area MPO

Severity Injury	Severity Score
Fatality	5
Disabling Injury	4
Evident Injury	3
Possible Injury	2
No or Unknown Injury	1

KEY FINDINGS – WHAT (Cont.)
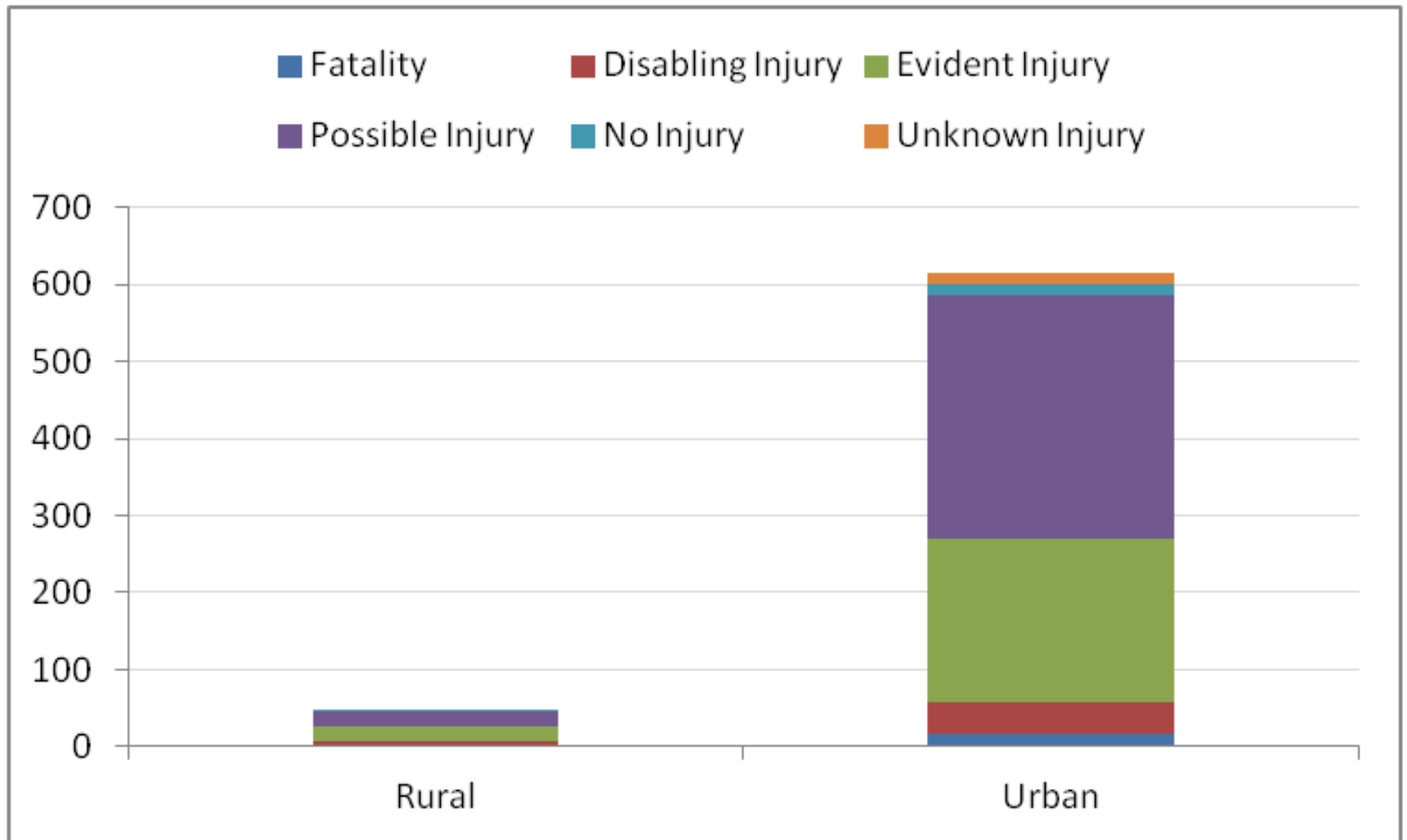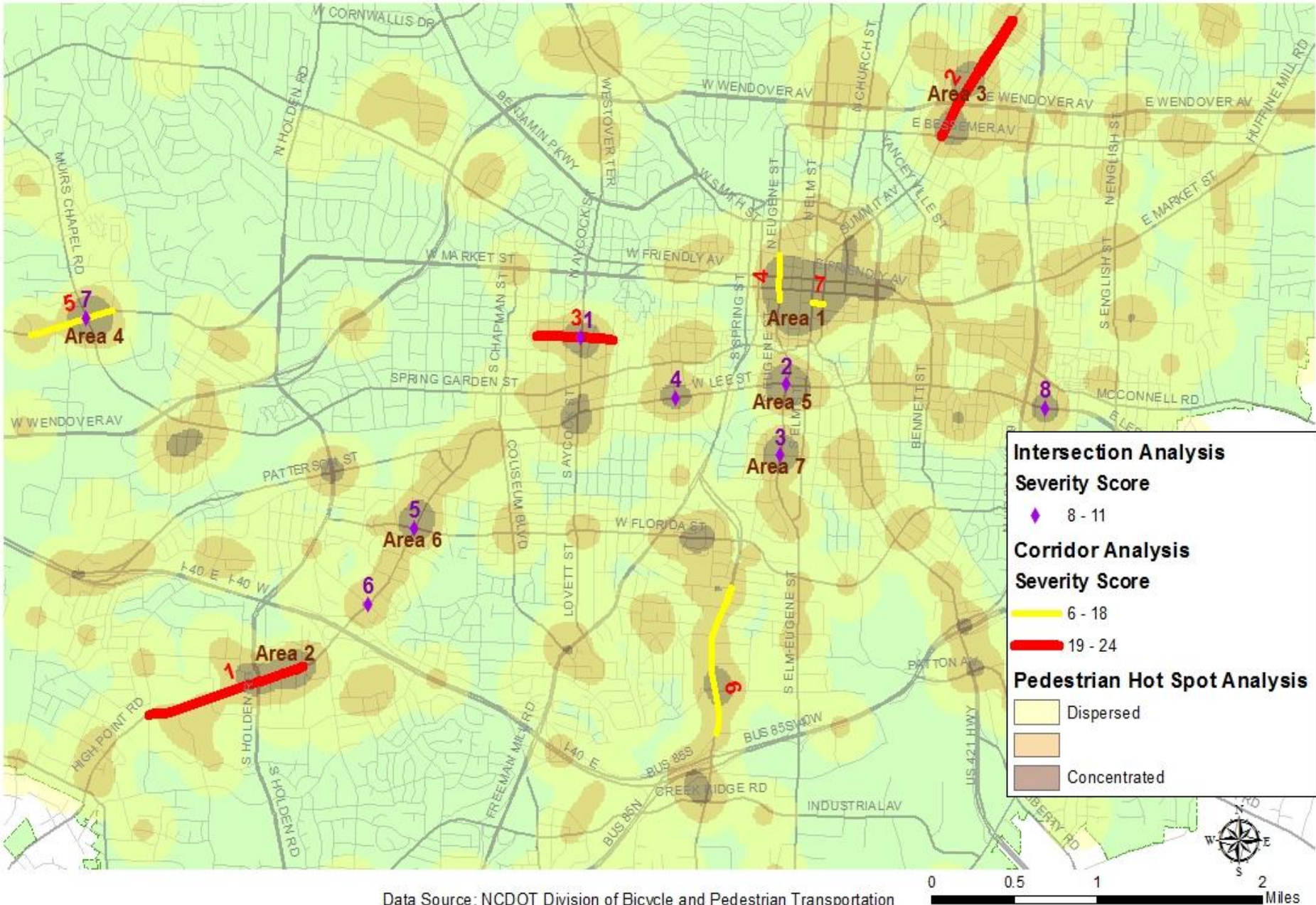

2007 - 2011 Pedestrian Fatality in GUAMPO

Pedestrian Crash Fatality in MPOs 2007-2011

KEY FINDINGS - WHERE CRASHES HAPPENED?

Pedestrian Crash Analysis

Intersection Analysis
Severity Score
- ◆ 8 - 11

Corridor Analysis
Severity Score
— 6 - 18
— 19 - 24

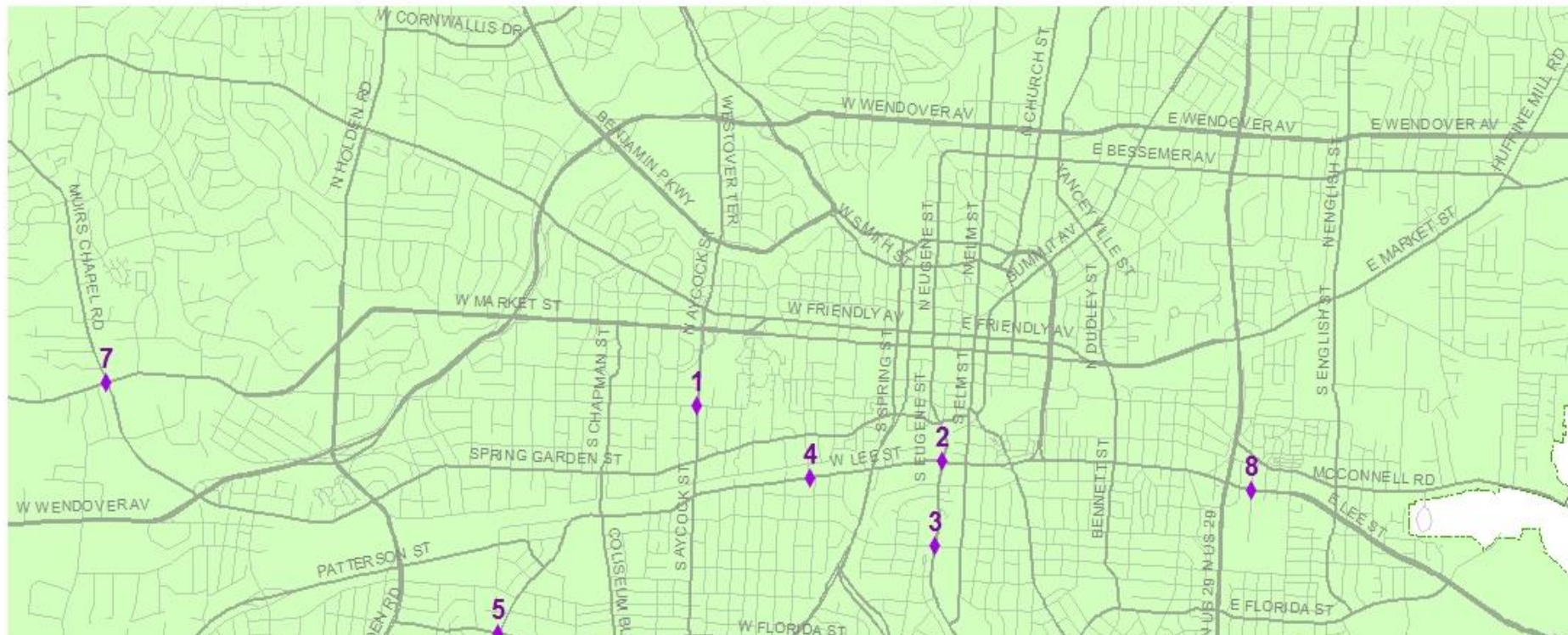**Pedestrian Hot Spot Analysis**
- Dispersed
- Concentrated

Data Source: NCDOT Division of Bicycle and Pedestrian Transportation

0   0.5   1   2 Miles

Pedestrian Crash Intersection Analysis


Intersection Number	Street Name	Severity Score	Reported Incidents	Traffic Control	Pedestrian Traffic
1	S Aycock St & Walker Ave	11	5	Stop And Go Signal	Yes
2	S Eugene St & W Lee St	11	4	Stop And Go Signal	Yes
3	S Eugene St & W Whittington St	11	4	Stop And Go Signal	Yes

Pedestrian Crash Corridor Analysis
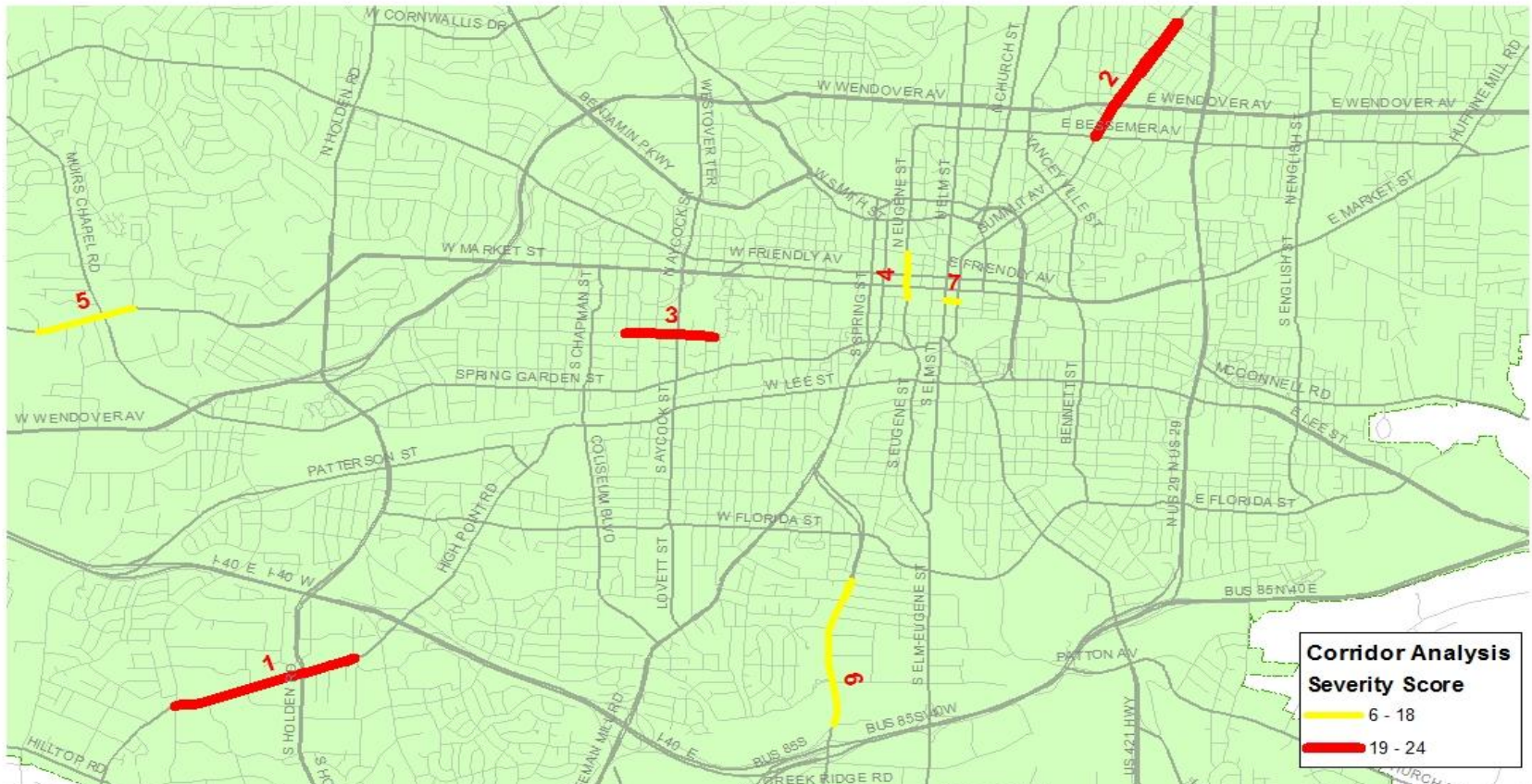
Corridor Number	Street Name	From	To	Severity Score	Reported Incidents	Crash Rate per Mile
1	High Point	Merritt	Veasley/Koury	24	9	24.67
2	Summit	Bessemer	Textile	22	7	18.98
3	Walker	Kensington	West Dr	19	8	41.46

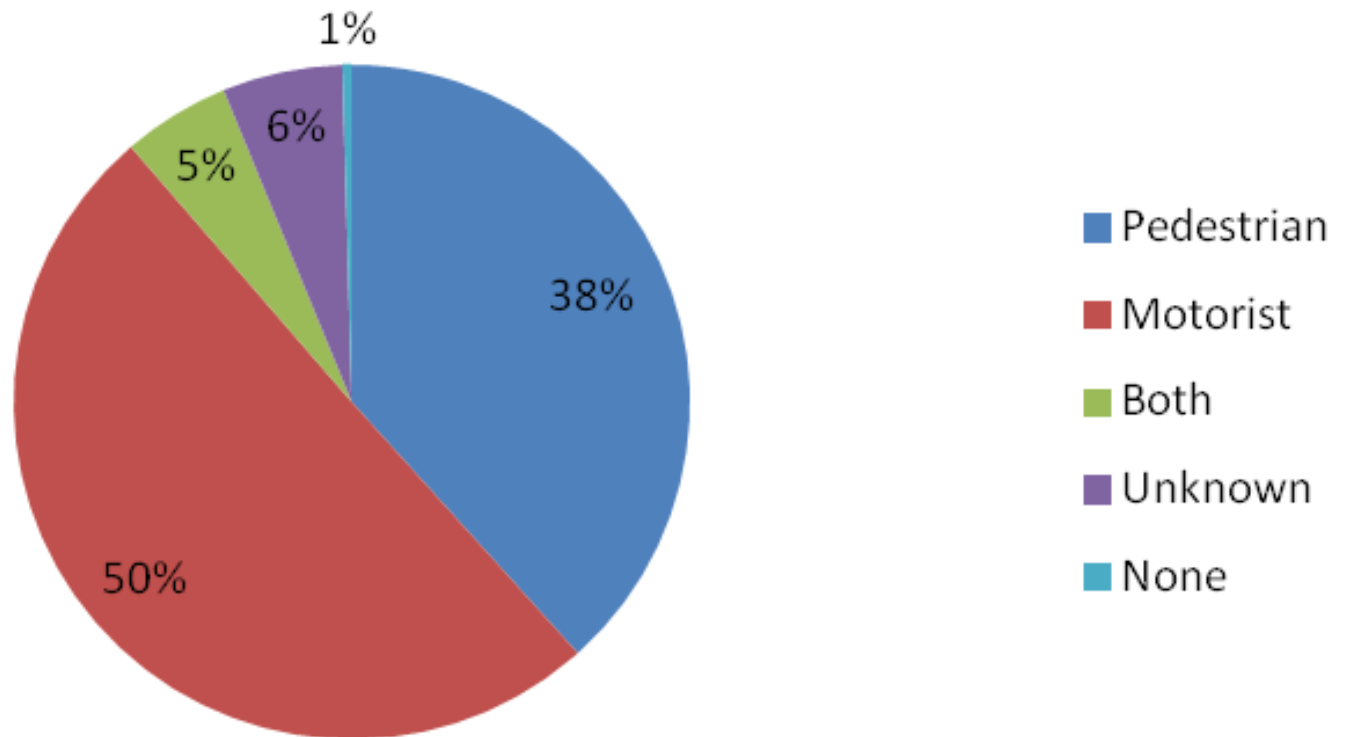# Pedestrian Crash - Hot Spot Analysis

Pedestrian Hot Spot Analysis

	Dispersed
	Concentrated
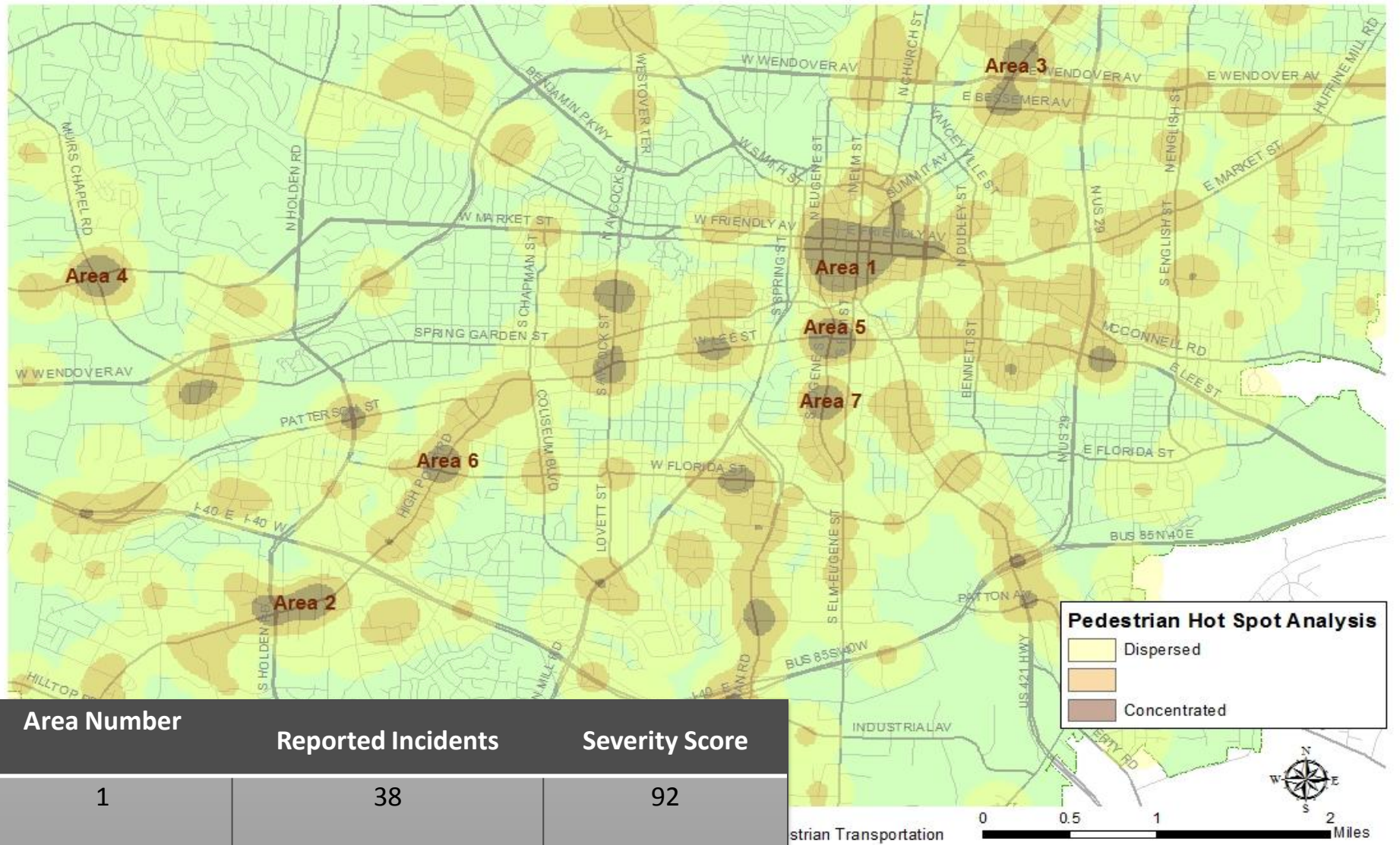
Area Number	Reported Incidents	Severity Score
1	38	92
2	12	30
3	10	27

Facility	Number of facility	½ mile distance				¼ mile distance			
		Number of facility	% of facility	Number of crashes	% of crashes	Number of facility	% of facility	Number of crashes	% of crashes
GTA bus stops	1,103	995	90.2%	555	84.1%	737	66.8%	452	68.5%
Schools	148	51	34.5%	180	27.3%	29	19.6%	49	7.4%
Retail centers	137	100	73.0%	293	44.4%	83	60.6%	160	24.2%
Industrial parks	48	12	25.0%	52	7.9%	6	12.5%	18	2.7%
Parks & Open Spaces	612	241	39.4%	430	65.2%	129	21.1%	186	28.2%

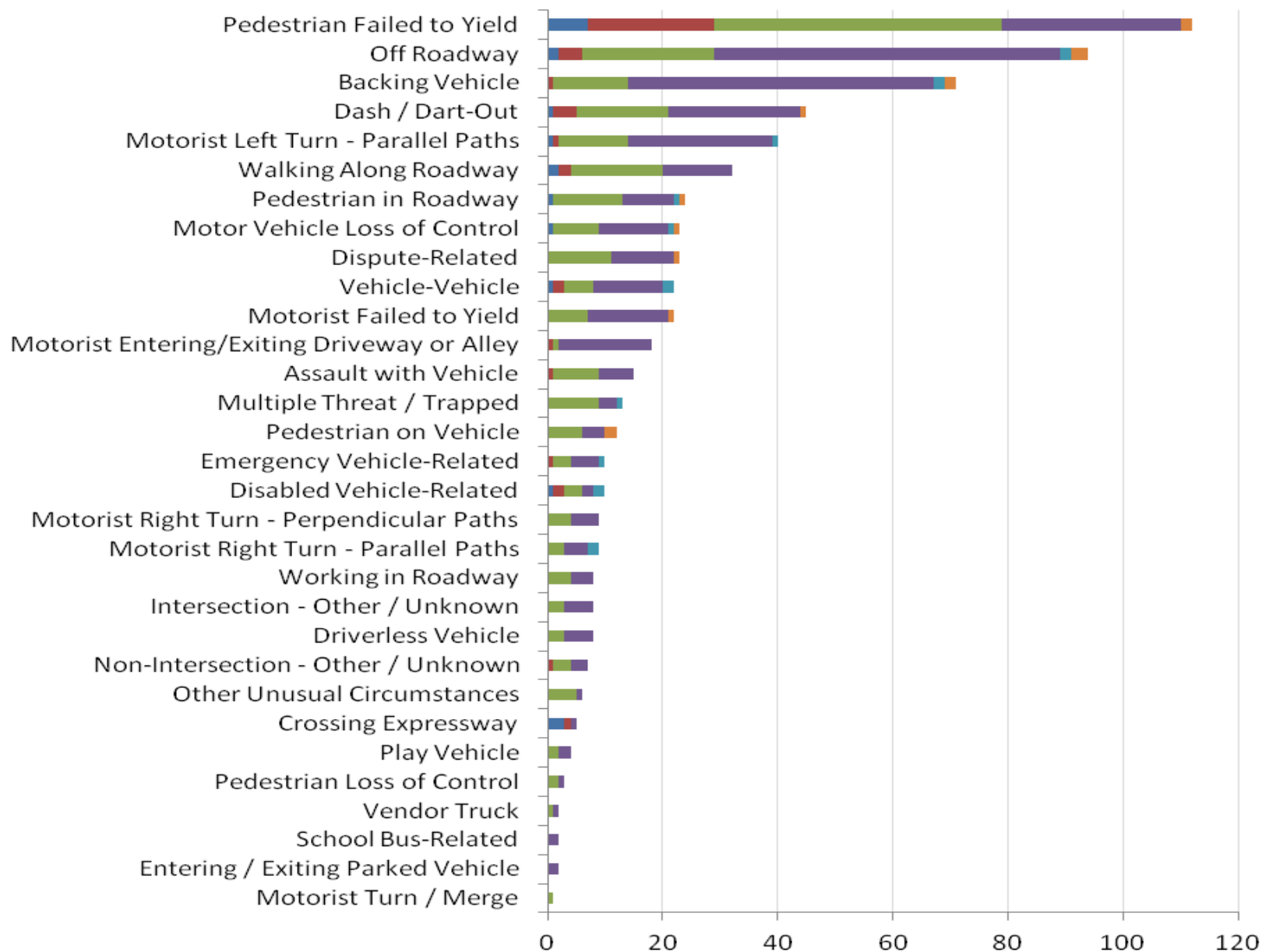| Category	Name	Location	Number of crashes	Severity score
Parks and Open Space	Mural Park (Beautification Area)	240 S Elm St, Greensboro	18	44
	Center City Park	200 N Elm St, Greensboro	13	32
Bus Stops	Eugene St/ Market St	Eugene St/ Market St	17	39
	Davie St/Cultural Arts Center	Davie St/Cultural Arts Center	15	37
Retail Centers	Shoppes on Market	4640 W Market St, Greensboro	9	24
	West Market Shopping Center	4653 W Market St, Greensboro	8	22
	Visionworks Plaza	3702 High Point Rd, Greensboro	8	20
Schools (K-12)	The Academy at Smith (High school, $9^{th} - 12^{th}$)	2225 S Holden Rd, Greensboro	6	13
	The Academy at Lincoln (Middle/Magnet, $6^{th} - 8^{th}$)	1016 Lincoln St, Greensboro	4	11
	Dudley High School (High school, $9^{th} - 12^{th}$)	1200 Lincoln St, Greensboro	4	11
	Wiley Elementary School (Elementary, Pre-K – 5th)	600 W Terrell St, Greensboro	4	11
Industrial Parks	South Atlantic Companies	2018-2030 E Market St	6	17
	O'Neal Steel	1451 S Elm-Eugene St	3	9

KEY FINDINGS – WHY CRASHES HAPPENED?
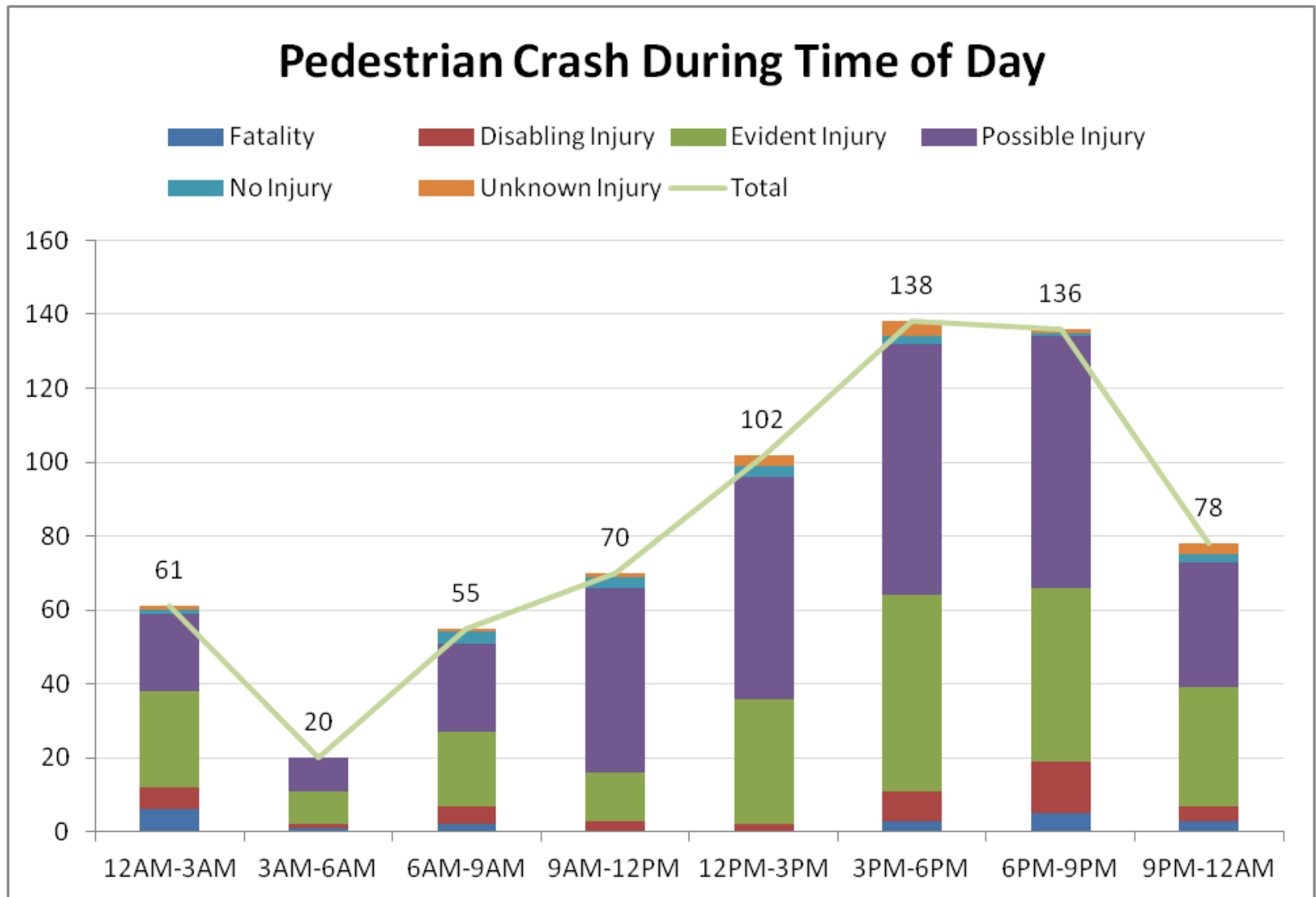
Contributed Factors in Crash

- Pedestrian — 38%
- Motorist — 50%
- Both — 5%
- Unknown — 6%
- None — 1%

Pedestrian Crash Reason

Legend: Fatality, Disabling Injury, Evident Injury, Possible Injury, No Injury, Unknown Injury

Categories (top to bottom):
- Pedestrian Failed to Yield
- Off Roadway
- Backing Vehicle
- Dash / Dart-Out
- Motorist Left Turn - Parallel Paths
- Walking Along Roadway
- Pedestrian in Roadway
- Motor Vehicle Loss of Control
- Dispute-Related
- Vehicle-Vehicle
- Motorist Failed to Yield
- Motorist Entering/Exiting Driveway or Alley
- Assault with Vehicle
- Multiple Threat / Trapped
- Pedestrian on Vehicle
- Emergency Vehicle-Related
- Disabled Vehicle-Related
- Motorist Right Turn - Perpendicular Paths
- Motorist Right Turn - Parallel Paths
- Working in Roadway
- Intersection - Other / Unknown
- Driverless Vehicle
- Non-Intersection - Other / Unknown
- Other Unusual Circumstances
- Crossing Expressway
- Play Vehicle
- Pedestrian Loss of Control
- Vendor Truck
- School Bus-Related
- Entering / Exiting Parked Vehicle
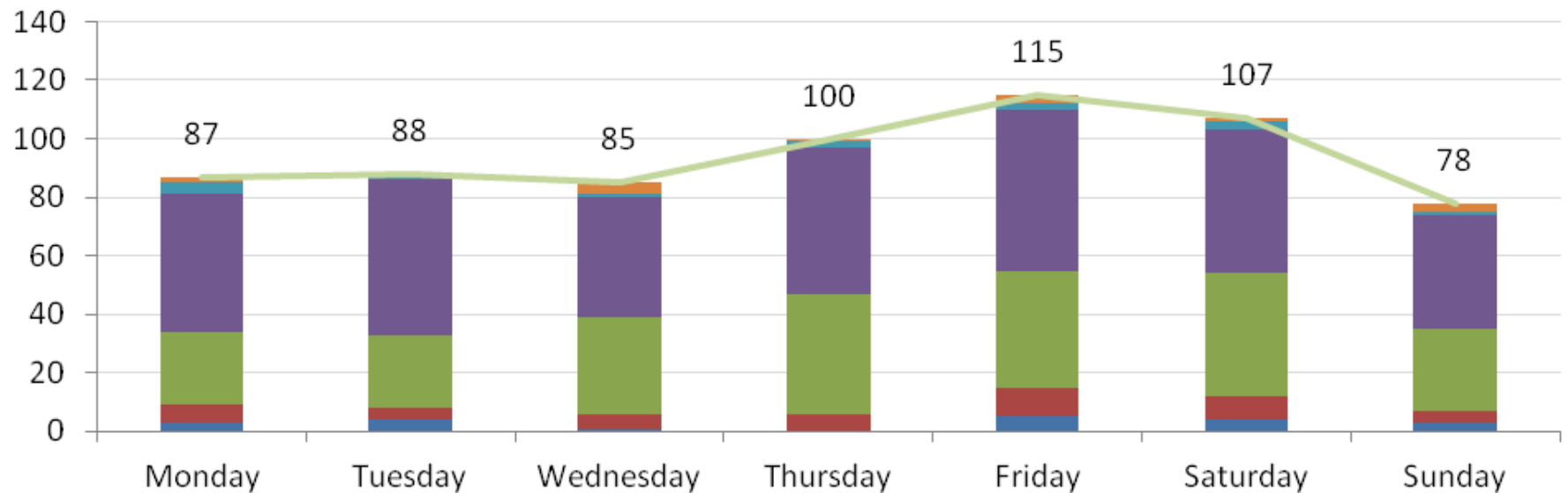- Motorist Turn / Merge

X-axis: 0, 20, 40, 60, 80, 100, 120

KEY FINDINGS: WHEN CRASHES HAPPENED?

KEY FINDINGS – WHEN (Cont.)

Pedestrian Crash During Day of Week

Legend: Fatality, Disabling Injury, Evident Injury, Possible Injury, No Injury, Unknown Injury, Total

Monday: 87
Tuesday: 88
Wednesday: 85
Thursday: 100
Friday: 115
Saturday: 107
Sunday: 78

KEY FINDINGS - WHEN (Cont.)

Pedestrian Crashes During Months of Year
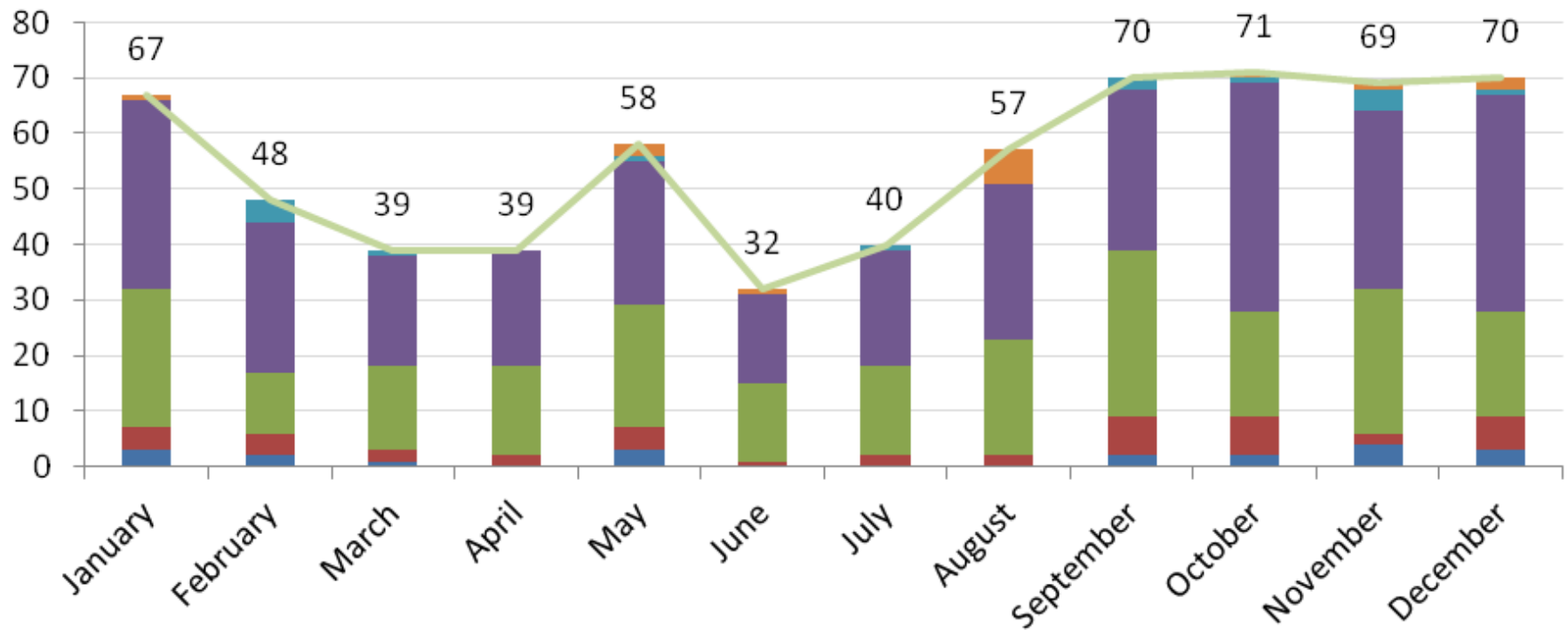
KEY FINDINGS - WHO WAS INVOLVED IN THE CRASH?

FUTURE WORK
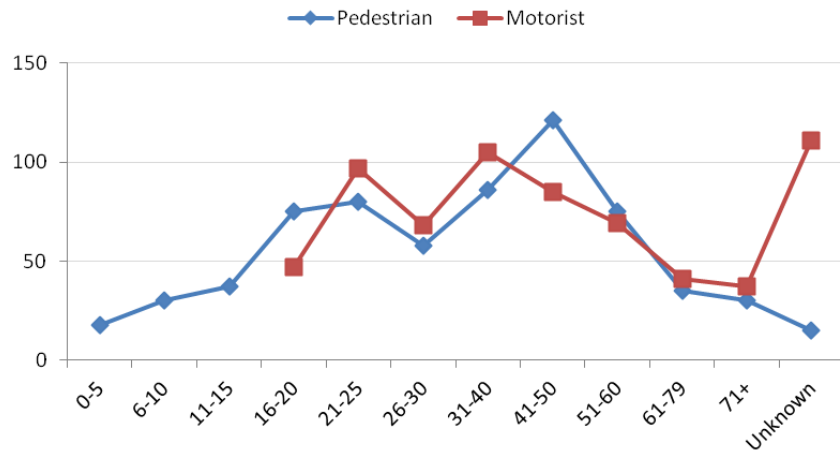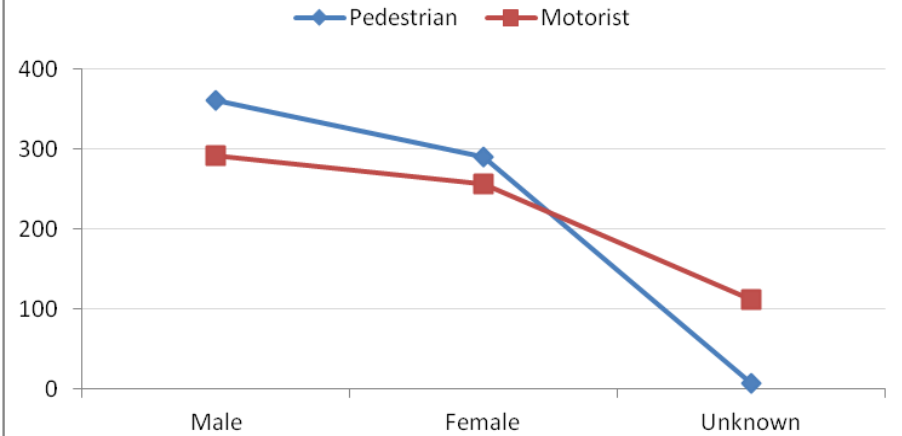
Crash analysis → Review → •Pedestrian facility improvement •Education programs for pedestrians and motorists